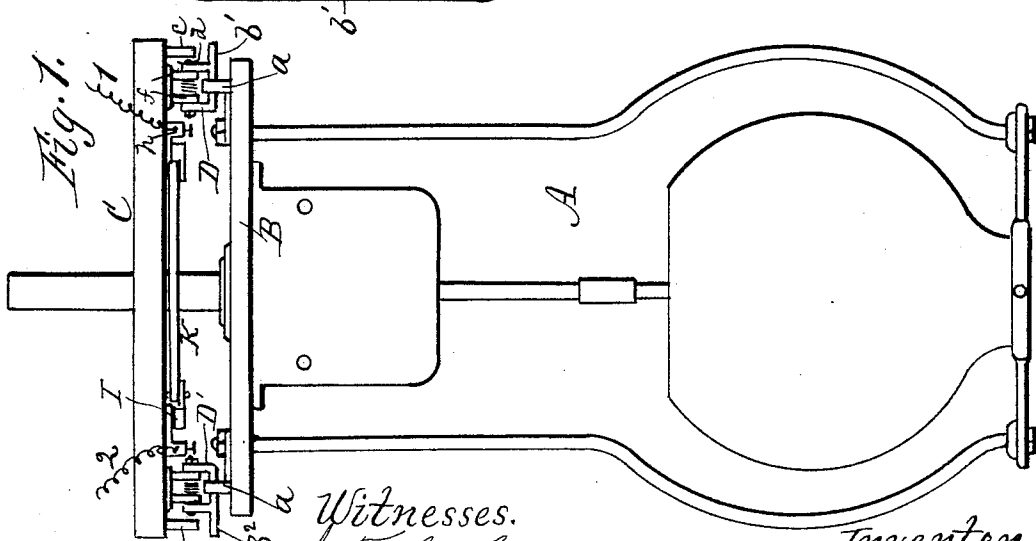
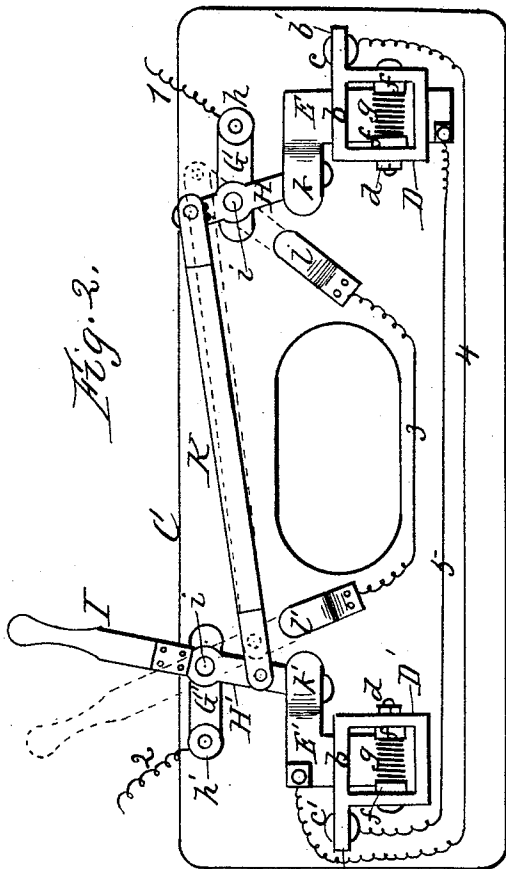


(No Model.)

H. R. QUINBY.
SWITCH FOR ELECTRIC LAMPS.

No. 571,791.

Patented Nov. 24, 1896.



Witnesses.
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C. R. Orgood.

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UNITED STATES PATENT OFFICE.

HENRY R. QUINBY, OF ROCHESTER, NEW YORK.

SWITCH FOR ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 571,791, dated November 24, 1896.

Application filed December 4, 1895. Serial No. 571,072. (No model.)

To all whom it may concern:

Be it known that I, HENRY R. QUINBY, of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Switches for Electric Lamps; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this application.

My improvement relates to switches for high-tension electric lamps, so arranged that in case any particular lamp is detached from its hangings, in whole or in part, the current is maintained through the main line notwithstanding that particular lamp is out of circuit.

The invention consists in the construction and arrangement of parts hereinafter described and claimed.

In the drawings, Figure 1 is a front elevation of an electric lamp with my improvement attached. Fig. 2 is an enlarged plan view of the switchboard C, looking on the under side. Fig. 3 is an enlarged end elevation of the hanger and switch board, showing the open-hook connection between said parts.

A indicates an ordinary high-tension lamp permanently attached to a lamp-board B, which forms its top, and which in turn is suspended from the hanger-board C in such a manner that it can be removed at any time. For this purpose the lamp-board B is provided with open hooks *a a*, which are hung on the side pieces *b b* of square-shaped yokes *D D'*, pivoted on the underside of the hanger-board. These side pieces *b b* have projecting ends *b' b''*, which rest under metallic pins *c c'*, projecting down from the hanger-board. The pivots of the yokes consist of bolts *d d'*, attached to lugs *f f'* of metallic plates *E E'*, secured to the under side of the hanger-board. Around the bolts are torsion-springs *g g'*, which tend to swing the yokes up, so that the parts *b' b''* of the yokes come in contact with the pins *c c'*; but they are held separated from the pins by the weight of the lamp overcoming the springs. In case, however, the hook on one side or the other becomes detached the yoke on that side is forced up by the spring in contact with the pin *c*.

G G' are two metallic plates attached to the under side of the hanger-board and provided with two binding-posts *h h'*, with which con-

nect the two wires 1 2 of the main line. To these plates *G G'* are pivoted at *i i* two arms *H H'*, one of which, *H'*, has a projecting handle *I*, made of insulating material. These two arms *H H'* are connected by a rod *K*, also made of insulating material. By operating the handle the arms swing inward and outward. When swung out, the ends of the two arms connect with two outer contact-plates *k k'*, forming parts of the conducting-plates *E E'*, and when swung inward they separate from said outer contact-plates *l l'*, which are isolated or stand alone. The electrical connections, aside from the main wires 1 2, consist of a wire 3, connecting the two inner contact-plates *l l'*, a wire 4, connecting the pin *c* with the metallic bearing-plate *E'*, and a wire 5, connecting pin *c'* with the metallic bearing *E* on the opposite side.

Under normal conditions, with the hooks *a a* engaged with the yokes *D D'*, suspending the lamp, the handle *I* is turned so that the two arms *H H'* are in connection with the two outer contact-plates *k k'*, as shown by full lines in Fig. 2. In this case the current passes from wire 1 through arms *G H*, contact *k*, plate *E*, yoke *D*, through the lamp, thence through yoke *D'*, plate *E'*, arms *H' G'*, and out through wire 2. In case the hook of the lamp is detached on one side, the yoke *D* on that side being separated from the hook *a*, the yoke springs up against the pin *c* and a new circuit is established—viz., from wire 1 through arms *G H*, contact *k*, plate *E*, yoke *D*, pin *c*, (with which the yoke is then in contact,) wire 4, plate *E'*, contact *k'*, arms *H' G'*, and out through wire 2, thus preserving integrity of the main line notwithstanding this particular lamp is out of circuit. The same result occurs if the yoke *D'* on the opposite side is detached from its hook, the connection then being made from wire 1 through arms *G H*, plate *E*, wire 5, pin *c'*, yoke *D'*, (then in contact with pin *c'*,) plate *E'*, arms *H' G'*, and out through wire 2. If both yokes are detached, as in removing the lamp, the same result is produced, as the closing of the yoke *D* with pin *c* makes a connection from *E* to *E'* through wire 4.

To remove the lamp, the handle *I* is thrown, bringing the parts into the position shown by dotted lines, Fig. 2, the arms *H H'* being

shifted to contact with the inner isolated contact-plates *l l'*. The circuit is then from wire 1 through plates *G H*, contact *l*, wire 3, contact *l'*, arm *H'*, plate *G'*, and out through wire

5 2. In such case the lamp is cut out from the circuit and can be handled with safety.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

10 1. In an electric-lamp switch, the combination, with the lamp-board *B* and hanger-board *C*, of the yokes *D D'* pivoted to the hanger-board so as to turn up and down; the springs *g g* for forcing the yokes upward; the contact-pins *c c'* resting in line with the yokes and against which the yokes strike; and the open hooks *a a* attached to the lamp-board and engaging with the yokes and drawing them down from contact with the pins; as shown and described and for the purpose specified.

20 2. In an electric-lamp switch, the combina-

tion of the two metallic plates *E E'* attached to the hanger-board; the spring-yokes *D D'* pivoted thereto; the contact-pins *c c'* resting in line therewith; the hooks *a a* attached to the lamp-board engaging with the yokes and drawing them away from the pins; the two metallic plates *G G'* attached to the lamp-board; the two arms *H H'* pivoted thereto; the rod *K* connecting the arms; and the two sets of contact-plates *k k'* and *l l'* with which the arms connect when swung in opposite directions, thereby changing the circuit as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HENRY R. QUINBY.

Witnesses:

R. F. OSGOOD,

GEORGE A. GILLETTE.